

Message Text

CONFIDENTIAL

PAGE 01 STATE 156064

13

ORIGIN EB-11

INFO OCT-01 CIAE-00 COME-00 DODE-00 NSAE-00 RSC-01 TRSE-00

EUR-25 AEC-11 ADP-00 /049 R

DRAFTED BY EB/ITP/EWT:JMGREGORY,JR.:MLM

8/7/73 EXT 20442

APPROVED BY EB/ITP/EWT:JMGREGORY,JR.

RPE

----- 031624

R 080027Z AUG 73

FM SECSTATE WASHDC

TO USMISSION OECD PARIS

C O N F I D E N T I A L STATE 156064

EXCON

E.O. 11652: XGDS-1

TAGS: ESTC, COCOM, US, PL

SUBJECT: U.S. SEMICONDUCTOR MANUFACTURING EQUIPMENT TO
POLAND - IL 1355

REFS: (A) COCOM DOC (73)933, (B) OECD PARIS 20825,
(C) COCOM DOC (73)1312

1. FYI - APPRECIATE DEL'S PROBLEM DESCRIBED PARA 4 REF B.
IT IS CLEAR THAT THE TEMPTATION FOR THE U.K. TO LOCK THE
U.S. IN ITS OWN CLOSET WAS IRRESISTIBLE REGARDLESS OF
FIGURE WHICH MIGHT HAVE BEEN USED IN REF C. INASMUCH AS
THE RELATIONSHIP OF REF A TO (71)37 WAS NOT FORESEEN IN
PREPARING THE CASE FOR SUBMISSION, THE WORDS "EXCESS
PRODUCTION" USED BY THE APPLICANT WERE EVIDENTLY NOT FULLY
EVALUATED BEFOREHAND. END FYI. DEL SHOULD AMEND CASE
TO REFLECT PROPER PRODUCTION FIGURE WHICH IS BASED ON
24 HOUR CONTINUOUS OPERATION.

2. WHEN THE APPLICANT FILED ITS INITIAL EXPORT LICENSE
APPLICATION SEEKING AUTHORIZATION TO EXPORT TECHNICAL DATA
CONFIDENTIAL

CONFIDENTIAL

PAGE 02 STATE 156064

AND EQUIPMENT TO POLAND FOR USE IN THE PRODUCTION OF

RECTIFIERS, IT CITED 100,000 RECTIFIERS PER YEAR AS THE PRODUCTION CAPABILITY OF THIS PROPOSED POLISH FACILITY BECAUSE THE FIRM WAS INVOLVED IN THE PRODUCTION GUARANTEES RELATING ONLY TO 100,000 RECTIFIERS PER YEAR. HOWEVER, IN RESPONSE TO THE U.K. ENQUIRY WHY SEVEN FURNACES

(21 TUBES) ARE REQUIRED FOR THE PRODUCTION OF 100,000 RECTIFIERS PER YEAR, THE FIRM REPLIED THAT, IN ADDITION TO THE GUARANTEED 100,000 PRODUCTION FIGURE, THE POLIES WHOLLY ON THEIR ON INTEND TO PRODUCE AN ADDITIONAL 100,000 RECTIFIERS PER YEAR. THE PRODUCTION OF 200,000 RECTIFIERS PER YEAR WOULD REQUIRE THE FULL CAPACITY USE OF THE REFERENCED SEVEN FURNACES (21 TUBES). INASMUCH AS RECTIFIERS ARE NOT EMBARGOED, U.S. AUTHORITES DIRECTED THEIR ATTENTION TO ASSURING THAT THE FULL CAPABILITY OF THE FURNACES WOULD BE FULLY ACCOUNTED FOR IN THE PRODUCTION OF RECTIFIERS. THE APPLICANT'S EXPLANATION THAT THE FULL CAPACITY OF THE SEVEN FURNACES INVOLVED IS REQUIRED FOR THE PRODUCTION OF 200,000 RECTIFIERS PER YEAR, ANSWERS THE QUESTION OF THE U.K. DELEGATE AS TO THE USE OF THE ENTIRE OUTPUT OF THE SEVEN FURNACES INVOLVED.

3. THEREFORE IT WOULD BE APPROPRIATE TO REQUEST AMENDMENT OF THE ORIGINAL PROPOSAL TO REFLECT THESE DIFFERENT CIRCUMSTANCES.

4. THE FORMULA FOR DETERMINING THAT THE ENTIRE OUTPUT OF THESE FURNACES IS REQUIRED FOR THE PRODUCTION OF 200,000 RECTIFIERS PER YEAR IS AS FOLLOWS:

A. ALL THE DIFFUSION FURNACES ARE TO BE USED ON A 24 HOUR BASIS AND 21 DAYS PER MONTH.

B. THE GUARANTEED PRODUCTION OF THE FIRST 100,000 RECTIFIERS (TYPES T-5, T-6, T-7, AND T-9), WITH ANTICIPATED REJECTS, WILL REQUIRE 17,150 SLICE STARTS PER MONTH. PRODUCTION OF THESE RECTIFIERS REQUIRES 7 DIFFUSION CYCLES PER SLICE WITH EACH CYCLE REQUIRING 20 HOURS. TUBE LOADS RANGE FROM 110 TO 750 SLICES AND EACH SLICE YIELDS ONLY ONE RECTIFIER. CALCULATIONS SHOW THAT 13.8

CONFIDENTIAL

CONFIDENTIAL

PAGE 03 STATE 156064

TUBES ARE REQUIRED FOR THE GUARANTEED PRODUCTION RATE.

C. FOR THE SECOND 100,000 RECTIFIERS (TYPES R-5, R-6, R-7, AND R-9) WHICH THE POLES INTEND PRODUCING ON THEIR OWN, 17,150 SLICE STARTS PER MONTH ARE REQUIRED. PRODUCTION OF THESE DEVICES REQUIRE THREE DIFFUSION CYCLES PER SLICE WITH EACH CYCLE BEING 24 HOURS IN LENGTH. FURNACE LOADINGS RANGE FROM 110 TO 750 SLICES PER TUBE

AND EACH SLICE YIELDS ONE DEVICE. CALCULATIONS SHOW THAT 7.5 TUBES ARE REQUIRED FOR THE DESIRED PRODUCTION RATE.

D. COMPARISON OF THIS CASE TO A RECENT U.K. PROPOSED EXPORT OF A DIODE PLANT TO THE USSR SHOWED THE FOLLOWING

DIFFERENCES WHICH WOULD AFFECT THE DIFFUSION FURNACE REQUIREMENTS:

(1) EACH U.K. DIODE SLICE COULD YIELD 12 OR 25 DEVICES PER SLICE DEPENDING ON WHETHER ITALIAN OR U.S. DEVICE PER SLICE DATA IS USED. FOR THE SUBJECT U.S. PROPOSED EXPORT, SLICES YIELD ONLY ONE DEVICE PER SLICE.

(2) THE U.K. DIODE PROCESS REQUIRED TWO DIFFUSION CYCLES, ONE OF ONE HOUR DURATION AND A SECOND CYCLE OF 36 HOURS. SUBJECT SLICES REQUIRE 7 CYCLES OF 20 HOURS FOR "T"-SERIES DEVICES AND 3 CYCLES OF 24 HOURS FOR "R" SERIES DEVICES.

(3) THE U.K. CALCULATED THEIR TUBE UTILIZATION ON THE BASIS OF 15 HOURS/DAY 5 DAY WEEK. THIS APPEARS TO BE INCONSISTENT WITH UTILIZATION OF U.K. 36 HOUR CYCLE. INTERMITTENT OPERATION IS SUGGESTED. HOWEVER, THAT IS NOT AN ACCEPTABLE OPERATING PRACTICE. ON THAT CASE, THE U.S. CALCULATIONS AS WELL AS THOSE OF THE U.K. DEL SHOULD HAVE BEEN CALCULATED ON 24 HOUR BASIS AS IS THE CASE IN THE PRESENT PROPOSAL. ROGERS

CONFIDENTIAL

NNN

Message Attributes

Automatic Decaptioning: X
Capture Date: 01 JAN 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: n/a
Control Number: n/a
Copy: SINGLE
Draft Date: 08 AUG 1973
Decaption Date: 01 JAN 1960
Decaption Note:
Disposition Action: RELEASED
Disposition Approved on Date:
Disposition Authority: morefirh
Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
Disposition Date: 28 MAY 2004
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1973STATE156064
Document Source: CORE
Document Unique ID: 00
Drafter: JMGREGORY,JR.:MLM
Enclosure: n/a
Executive Order: X1 GREGORY
Errors: N/A
Film Number: n/a
From: STATE
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1973/newtext/t19730850/aaaabkvd.tel
Line Count: 144
Locator: TEXT ON-LINE
Office: ORIGIN EB
Original Classification: CONFIDENTIAL
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 3
Previous Channel Indicators:
Previous Classification: CONFIDENTIAL
Previous Handling Restrictions: n/a
Reference: 73 (A) COCOM DOC (73)933, (B) OECD P, ARIS 20825
Review Action: RELEASED, APPROVED
Review Authority: morefirh
Review Comment: n/a
Review Content Flags:
Review Date: 21 AUG 2001
Review Event:
Review Exemptions: n/a
Review History: RELEASED <21-Aug-2001 by izenbei0>; APPROVED <19-Nov-2001 by morefirh>
Review Markings:

Declassified/Released
US Department of State
EO Systematic Review
30 JUN 2005

Review Media Identifier:
Review Referrals: n/a
Review Release Date: n/a
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
Secure: OPEN
Status: NATIVE
Subject: U.S. SEMICONDUCTOR MANUFACTURING EQUIPMENT TO POLAND - IL 1355
TAGS: ESTC, US, PL, COCOM
To: OECD PARIS
Type: TE
Markings: Declassified/Released US Department of State EO Systematic Review 30 JUN 2005